



ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDIVIDUAL PERMIT – PROPOSED FINAL

Permit Number: AK0000507

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations. The

AGRIUM KENAI NITROGEN OPERATIONS

is authorized to discharge from the Agrium Kenai Nitrogen Operations facility at Mile 21 Kenai Spur Hwy. Kenai, Alaska at the following location(s):

| Outfall | Receiving Waterbody | Latitude | Longitude |
|---------|---------------------|-------------------|-------------------|
| 001 | Cook Inlet | 60.67151211 North | 151.39174974 West |

In accordance with the discharge point(s) effluent limitations, monitoring requirements, and other conditions set forth herein:

This permit and authorization shall become effective **DRAFT**

This permit and the authorization to discharge shall expire at midnight, **DRAFT**

The permittee shall reapply for a permit reissuance on or before **DRAFT**, 180 days before the expiration of this permit if the permittee intends to continue operations and discharge(s) at the facility beyond the term of this permit.

The permittee shall post or maintain a copy of this permit to discharge at the facility and make it available to the public, employees, and subcontractors at the facility.

DRAFT

Signature

DRAFT

Date

DRAFT

Printed Name

Program Manager

Title

TABLE OF CONTENTS

SCHEDULE OF SUBMISSIONS..... 3

1.0 LIMITATIONS AND MONITORING REQUIREMENTS..... 5

1.1 Discharge Authorization 5

1.2 Effluent Limits and Monitoring 5

1.3 Whole Effluent Toxicity Testing Requirements 7

1.4 Mixing Zone..... 10

1.5 Receiving Water Monitoring 10

2.0 SPECIAL CONDITIONS 12

2.1 Quality Assurance Project Plan 12

2.2 Best Management Practices Plan 13

2.3 Operation and Maintenance Plan 16

2.4 Electronic Reporting (E-Reporting) Rule 16

2.5 Removed Substances 16

2.6 Air and Land Releases 16

LIST OF TABLES

Table 1: Schedule of Submissions3

Table 1: Schedule of Submissions Continued4

Table 2: Outfall 001: Effluent Limits and Monitoring Requirements6

Table 3: Chronic Toxicity Triggers and Receiving Water Concentrations8

Table 4. Ambient Monitoring Requirements11

LIST OF APPENDICES

Appendix A – Standard ConditionsA-1

Appendix B – AcronymsB-1

Appendix C – Definitions.....C-1

SCHEDULE OF SUBMISSIONS

The Schedule of Submissions summarizes some of the required submissions and activities the permittee must complete and/or submit to the Alaska Department of Environmental Conservation (DEC) during the term of this permit. The permittee is responsible for all submissions and activities even if they are not summarized below.

Table 1: Schedule of Submissions

| Permit Part | Submittal or Completion | Frequency | Due Date | Submit to ^a |
|-------------------|--|----------------|---|------------------------|
| 1.3.5.1.3 | Exceedance of chronic toxicity trigger | As Necessary | Within two weeks of receipt of test results | Compliance |
| 1.3.7 | Whole Effluent Toxicity (WET) test results | Quarterly | Must be submitted with the first DMR following receipt of the test results. | Compliance |
| 1.3.7.2 | Accelerated testing results | As Necessary | Within two weeks of receipt of test results | Compliance |
| 1.5.11 | Receiving water monitoring results | Quarterly | Must be submitted with the first DMR following receipt of the test results. | Compliance |
| 1.5.13.1.7 | Receiving water monitoring location | As Necessary | Must be submitted prior to commencement of discharge operations. | Permitting |
| 1.5.12 & 2.2.6.1 | Annual Pollution Prevention Report | 1/year | Must be submitted with the first DMR two-years from the effective date of the permit. | Permitting |
| 2.1.2 | Quality Assurance Project Plan (QAPP) | 1/permit cycle | The plan must be reviewed and updated within 90 days after the effective date of the final permit. Provide DEC written notice upon completion. | Compliance |
| 2.2.5.2 | BMP Plan development letter | 1/permit cycle | The plan must be reviewed and updated within 180 days after the effective date of the final permit. Provide DEC written notice upon completion. | Compliance |
| 2.2.4.3 & 2.2.5.4 | BMP certified statement | 1/year | Must be submitted with the January DMR for the next year | Permitting |

Table 1: Schedule of Submissions Continued

| Permit Part | Submittal or Completion | Frequency | Due Date | Submit to ^a |
|-------------------------------------|--|----------------|---|------------------------|
| 2.2.7.2 | TRC treatability report | 1/permit cycle | Must be submitted one year from the effective date of the permit. | Permitting |
| 2.3 | Operation and Maintenance (O & M) Plan | 1/permit cycle | The plan must be reviewed and updated within 180 days after the effective date of the final permit. Provide DEC written notice upon completion. | Compliance |
| Appendix A, 3.2 | Discharge Monitoring Report (DMR) | Monthly | Must be postmarked or submitted electronically through the eDMR system, on or before the 15 th day of the following month. | Compliance |
| Appendix A, 1.3 | Application for Permit Reissuance | 1/permit cycle | 180 days before expiration of the final permit | Permitting |
| Appendix A, 3.4 | Oral notification of noncompliance | As Necessary | Within 24 hours from the time the permittee becomes aware of the circumstances of noncompliance | Compliance |
| Appendix A, 3.4 | Written documentation of noncompliance | As Necessary | Within 5 days after the permittee becomes aware of the circumstances | Compliance |
| a) See Appendix A 1.1 for addresses | | | | |

1.0 LIMITATIONS AND MONITORING REQUIREMENTS

1.1 Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from Outfall 001 specified herein to Cook Inlet, within the limits and subject to conditions set forth herein. This permit authorizes discharge of only those pollutants resulting from facility processes, waste streams, and operations clearly identified in the permit application process.

1.2 Effluent Limits and Monitoring

The permittee must limit and monitor discharges from Outfall 001 as specified in Table 2. All values represent maximum effluent limits, unless otherwise indicated. The permittee must comply with effluent limitations in the table at all times unless otherwise indicated, regardless of monitoring frequency or reporting required by other provisions of this permit.

Table 2: Outfall 001: Effluent Limits and Monitoring Requirements

| Parameter | Effluent Limits | | | | | Monitoring Requirements | | |
|--------------------------------------|-----------------|-----------------|----------------|---------------|--------------------------------------|-------------------------|-------------------------|--------------------------------|
| | Daily Minimum | Monthly Average | Weekly Average | Daily Maximum | Units | Sample Location | Sample Frequency | Sample Type |
| Total Discharge Flow | N/A | Report | N/A | N/A | MGD | Effluent | Continuous ^a | Recorded |
| Total Ammonia, as N | N/A | 1,849 | N/A | 3,636 | Pounds per day (lb/day) ^b | Effluent | 1/Week | 24-hour Composite ^c |
| Organic Nitrogen, as N | N/A | 2,842 | N/A | 5,313 | lb/day | Effluent | 1/Week | 24-hour Composite ^c |
| Temperature ^d | N/A | N/A | N/A | Report | ° C | Effluent | Continuous ^a | Recorded |
| Oil and Grease ^e | N/A | N/A | N/A | 15 | Milligrams per liter (mg/L) | Effluent | 1/Week | 24-hour Composite ^c |
| Total Residual Chlorine ^f | N/A | 1.43 | N/A | 4.75 | mg/L | Effluent | Continuous ^a | Recorded ^e |
| | N/A | 25.1 | N/A | 83.2 | lb/day | | 1/Day | Calculated |
| pH | 6.0 | N/A | N/A | 9.0 | Standard units | Effluent | Continuous ^a | Recorded ^e |
| Arsenic, total recoverable | N/A | N/A | N/A | Report | Micrograms per liter (µg/L) | Effluent | 2/Year | 24-hour Composite ^c |
| Copper, total recoverable | N/A | N/A | N/A | Report | µg/L | Effluent | 2/Year | 24-hour Composite ^c |
| Manganese, total recoverable | N/A | N/A | N/A | Report | µg/L | Effluent | 2/Year | 24-hour Composite ^c |
| Nickel, total recoverable | N/A | N/A | N/A | Report | µg/L | Effluent | 2/Year | 24-hour Composite ^c |
| Zinc, total recoverable | N/A | N/A | N/A | Report | µg/L | Effluent | 2/Year | 24-hour Composite ^c |
| Total aromatic hydrocarbons | N/A | N/A | N/A | Report | µg/L | Effluent | 1/Quarter | Grab |
| Total aqueous hydrocarbons | N/A | N/A | N/A | Report | µg/L | Effluent | 1/Quarter | 24-hour Composite ^c |
| Whole Effluent Toxicity | N/A | N/A | N/A | Report | Chronic toxic units (TUC) | Effluent | 1/Quarter | 24-hour Composite ^c |
| Production | N/A | N/A | N/A | N/A | Air dried tons per day | Effluent | 1/Day ^g | N/A |

Footnotes:

- Continuous recording may be interrupted for infrequent shutdowns for maintenance, process changes, or similar activities.
- lbs/day = concentration (mg/L) x flow (mgd) x 8.34 (conversion factor).
- See Appendix C of the permit for a definition.
- Temperature shall be reported as instantaneous maximum.
- Method 1664 may be used.
- Effluent limits for Total Residual Chlorine are not quantifiable using EPA-approved analytical methods. DEC will use the minimum detection limit of 0.1 mg/L as the compliance limit for this parameter.
- The maximum daily production values for urea and ammonia for the previous year shall be submitted with the January Discharge Monitoring Report of the following year.

- 1.2.1 The discharge shall not cause contamination of surface or ground waters, and shall not cause or contribute to a violation of the Alaska Water Quality Standards (18 Alaska Administrative Code (AAC) 70), unless allowed in this permit through exceptions to the standards or in a compliance schedule under 18 AAC 70.200 – 70.270 and 18 AAC 70.910.
- 1.2.2 Effluent samples must be collected from the effluent stream after the last treatment unit before discharge into receiving waters.
- 1.2.3 The permittee must not discharge any floating solids, debris, sludge, deposits, foam, scum or other residues that cause a film, sheen, or discoloration on the surface of the receiving water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.
- 1.2.4 The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units. Monitoring shall be continuous recording. The total time outside of the required range shall not exceed 7 hours and 26 minutes in any calendar month and no individual excursion shall exceed 60 minutes.
- 1.2.5 For all effluent monitoring, the permittee must use a sufficiently sensitive Environmental Protection Agency (EPA) approved test method that quantifies the level of pollutants to a level lower than applicable limits or water quality standards or use the most sensitive Title 40 Code of Federal Regulations (CFR) Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), adopted by reference at 18 AAC 83.010(f) test method available.
- 1.2.6 For purposes of reporting on the Discharge Monitoring Report (DMR) for a single sample, if a value is less than the method detection level (MDL), the permittee must report “less than [numeric value of MDL]” and if a value is less than a minimum level (ML), the permittee must report “less than [numeric value of ML].”
- 1.2.7 For purposes of calculating a monthly average, zero may be assigned for values less than the MDL, and the numeric value of the MDL may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report “less than {numeric value of MDL}.” If the average value is less than the ML, the permittee must report “less than [numeric value of ML].” If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level, ML, in assessing compliance.
- 1.2.8 Permittees have the option of taking more frequent samples than are required in the permit. These samples must be used for averaging if they are conducted using the Alaska Department of Environmental Conservation (DEC or Department) approved test methods (generally found in 18 AAC 70 and 40 CFR §136 [adopted by reference in 18 AAC 83.010]) and if the method detection limits are less than the effluent limits.

1.3 Whole Effluent Toxicity Testing Requirements

- 1.3.1 The permittee must conduct chronic WET monitoring quarterly from Outfall 001 during the permit term. If no toxicity is detected at the maximum concentration listed in Section 1.3.4.2 for four consecutive quarters after the facility is fully operational and actively producing ammonia and urea fertilizer as per the definition in 1.5.1, then the WET monitoring frequency may be reduced or discontinued upon written approval by the Department.
- 1.3.2 The permittee must conduct WET tests on 24-hour composite effluent samples using one vertebrate and one invertebrate species as follows:
 - 1.3.2.1 Vertebrate (survival and growth): *Atherinops affinis* (Topsmelt). In the event that topsmelt is not available, *Menidia beryllina* (inland silverside) may be used as a substitute. The permittee shall document the substitute species in the DMR following the testing.

- 1.3.2.2 Invertebrate: For larval development tests, the permittee must use the bivalve species *Crassostrea gigas* (Pacific oyster) or *Mytilus spp.* (mussel). Due to seasonal variability, testing may be performed during reliable spawning periods (e.g. December through February for mussels and June through August for oysters).
- 1.3.3 There are no chronic WET limits for this discharge. For this discharge, a mixing zone is authorized and the chronic WET permit triggers are any one test result greater than or equal to 625 TUc (Table 3). Results shall be reported in TUc, where:

$$\text{TUc} = 100/\text{NOEC} \text{ or } \text{TUc} = 100/\text{IC}_{25}.$$

See Appendix C, Definitions, for IC₂₅ and NOEC definitions. This permit requires additional toxicity testing (See Section 1.3.5) if a chronic WET permit trigger is exceeded.

Table 3: Chronic Toxicity Triggers and Receiving Water Concentrations

| Outfall | Chronic Toxicity Trigger - TUc | Receiving Water Concentration (RWC) Percent Effluent |
|---------|--------------------------------|---|
| 001 | 625 | 0.16% |

1.3.4 Quality Assurance

- 1.3.4.1 The presence of chronic toxicity must be estimated as specified in USEPA *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition (EPA-821-R-02-014). For the bivalve species, chronic toxicity must be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136), adopted by reference in 18 AAC 70.030. Results must be reported in TU_c, where TU_c = 100/IC₂₅, and 100/NOEC. A series of at least five dilutions and a control must be tested. The dilution series must be designed to provide useful toxicity information for evaluation during permit reissuance.
- 1.3.4.2 The permittee shall make every effort to have the toxicity tests initiated within thirty-six hours of sample collection. If this is not possible, the permittee must document that the delivery time cannot be met. In no case should more than seventy-two hours elapse between sample collection and use of a collected sample. The sample temperature must be maintained at 0-6 °C, from sample collection until test preparation.
- 1.3.4.3 The toxicity testing on each organism shall include a series of five test dilutions and a control. The test series shall include the following dilution concentrations: 2.5%, 0.63%, 0.16%, 0.04%, and 0.01% effluent.
- 1.3.4.4 The chronic toxicity trigger is defined as toxicity exceeding 625 TUc corresponding to receiving water dilution of 0.16% effluent.
- 1.3.4.5 In addition to those quality assurance measures specified in the methodology, the following quality assurance procedures must be followed:
- 1.3.4.5.1 If organisms are not cultured by the testing laboratory, concurrent testing with reference toxicants must be conducted, unless the test organism supplier provides control chart data from at least the last 5 months of reference toxicity testing. Where organisms are cultured by the testing laboratory, monthly reference toxicant testing is sufficient.
- 1.3.4.5.2 If either of the reference toxicant tests or the effluent tests does not meet all test acceptability criteria as specified in the test methods manual, then the permittee must re-sample and re-test as soon as possible.

- 1.3.4.5.3 To the extent practicable, control and dilution water should be receiving water. If the dilution water used is different from the culture water, a second control using culture water shall also be used. For purposes of this paragraph, “receiving water” means water collected from Cook Inlet, outside of the influence of the permittees’ discharge. In no case shall water that has not met test acceptability criteria be used as dilution water.

1.3.5 Accelerated Testing.

- 1.3.5.1.1 Initial investigation: If the toxicity trigger in Section 1.3.4.4 is exceeded during a test of either species and the permittee demonstrates through an evaluation of facility operations that the cause of an exceedance is known and corrective actions have been implemented, only one accelerated test for each affected species is necessary. If toxicity exceeding the chronic WET trigger in Section 1.3.4.4 is detected during the one additional test after the facility evaluation, then the Toxicity Reduction Evaluation (TRE) requirements in Section 1.3.6 shall apply, or
- 1.3.5.1.2 If chronic WET is detected above the triggers specified in Section 1.3.4.4 and no initial investigation is conducted or no cause is determined by an initial investigation, then the permittee must conduct two more biweekly (every two weeks) tests over a four week period. This accelerated testing must be initiated within two weeks of receipt of the test results that indicate exceedance.
- 1.3.5.1.3 The permittee must notify DEC of the exceedance in writing within two weeks of receipt of the test results. The notification must include the following information:
- A status report on any actions required by the permit, with a schedule for actions not yet completed;
 - A description of any additional actions the permittee has taken or will take to investigate and correct the cause(s) of the toxicity, and;
 - Where no actions have been taken, a discussion of the reasons for taking no action;
- 1.3.5.2 If neither of the two accelerated tests in 1.3.5.1.2 do not exceed the toxicity trigger in Table 3, the permittee may return to the normal testing frequency. Tests performed as part of accelerated testing are not counted in the normal testing frequency. If any of the two accelerated tests in 1.3.5.1.2 exceed the chronic WET trigger, then the TRE requirements of Section 1.3.6, shall apply.

1.3.6 Toxicity Reduction Evaluation and Toxicity Identification Evaluation.

- 1.3.6.1 If the chronic WET trigger is exceeded during accelerated testing under Section 1.3.5, the permittee must initiate a TRE in accordance with *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs)* (EPA/600-2-88/070, April 1989) within two weeks of the receipt of the test results showing an exceedance. At a minimum, the TRE must include:
- Further actions to investigate and identify the cause of toxicity;
 - Actions the permittee will take to mitigate the impact of the discharge and to prevent recurrence of toxicity;
 - A schedule for these actions; and
 - If a TRE is initiated, and both species are affected (if both are tested simultaneously), only the more sensitive of the two species, as shown by the initial failing test and accelerated testing, need be used to conduct the TRE.

- 1.3.6.2 The permittee may initiate a Toxicity Identification Evaluation (TIE) as part of the TRE process. Any TIE must be performed in accordance with EPA guidance manuals: *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-096-054), 1996); *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III: Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA-600/R-92/081, 1993).

1.3.7 Reporting

- 1.3.7.1 The permittee shall submit a full report of chronic WET test results with the monthly DMR following the receipt of the test results.
- 1.3.7.2 The permittee shall submit results of any accelerated testing, under Section 1.3.5, within two weeks of receipt of results from the laboratory. The full report must be submitted within four weeks of receipt of results from the laboratory. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, the result of the investigation must be submitted with the DMR for the month following completion of the investigation.
- 1.3.7.3 The toxicity test report must include all relevant information outlined in USEPA *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition (EPA-821-R-02-014). For the bivalve species, chronic toxicity must be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136). In addition to toxicity test results, the permittees must report: dates of sample collection and initiation of each test; the toxicity triggers as defined in Section 1.3.4.4; flow rate at the time of sample collection; and results of the monitoring required in Section 1.2.

1.4 Mixing Zone

- 1.4.1 In accordance with state regulations at 18 AAC 70.240, as amended through June 26, 2003, a mixing zone for ammonia, TRC, pH, temperature, and WET is authorized in Cook Inlet for this discharge.
- 1.4.2 The chronic mixing zone for this discharge has a dilution of 633:1 and is defined as the rectangular area centered over the diffuser from the end of the outfall line, extending from the seafloor to the sea surface, with a length of 822 meters and a width of 24 meters.
- 1.4.3 The acute mixing zone for this discharge has a dilution of 365:1 and is defined as the rectangular area centered over the diffuser from the end of the outfall line, extending from the seafloor to the sea surface, with a length of 478 meters and a width of 0.06 meters.

1.5 Receiving Water Monitoring

The permittee must conduct receiving water monitoring. Receiving water monitoring must start six months after commencement of discharge operations and continue for four sampling quarters. The program must meet the following requirements:

- 1.5.1 For the purposes of this permit, commencement of discharge operations shall be defined as occurring when the facility is actively producing ammonia and urea fertilizer.
- 1.5.2 Prior to commencement of discharge operations, if the permittee demonstrates through the TRC treatability study (Section 2.2.7.1) that dechlorination methods will be installed and implemented prior to initial discharge to reduce TRC in the effluent, the permittee must conduct ambient monitoring requirements as specified in Permit Sections 1.5.3 through 1.5.12 and the requirements in Permit Section 1.5.13 do not need to be completed by the permittee.

1.5.3 Monitoring stations must be established in Cook Inlet at the following locations:

- 1.5.3.1 A background station at a point representative of the quality of Cook Inlet, not influenced by the facility's discharge, and
- 1.5.3.2 Boundary of the chronic mixing zone. Sampling at the boundary of the chronic mixing zone shall be taken at two locations. One sample representative of the chronic mixing zone length boundary and one sample representative of the chronic mixing zone width boundary shall also be collected.

1.5.4 To the extent practicable, receiving water sample collection must occur on the same day as effluent sample collection.

1.5.5 All receiving water samples must be grab samples.

1.5.6 If documented environmental settings during the first quarter of the calendar year (January – March) prevent monitoring due to unsafe working conditions, two receiving water samples, spaced a minimum of four weeks apart, may be collected during the second quarter.

1.5.7 The effluent flow rate must be reported with the receiving water test results as near as practicable to the time the receiving water parameters are sampled.

1.5.8 Samples must be analyzed for the parameters and frequencies listed in Table 4

Table 4. Ambient Monitoring Requirements

| Parameter | Units | Background Sampling Frequency | Boundary of Mixing Zone Sampling Frequency | Sample Type |
|--------------------|----------------|-------------------------------|--|-------------|
| Total Ammonia as N | mg/L | 1/Quarter | 1/Quarter | Grab |
| TRC | µg/L | 1/Quarter | 1/Quarter | Grab |
| Temperature | °C | 1/Quarter | N/A | Measurement |
| pH | Standard Units | 1/Quarter | 1/Quarter | Grab |
| Salinity | grams/kilogram | 1/Quarter | N/A | Grab |

1.5.9 Quality assurance/quality control plans for all the monitoring must be documented in the Quality Assurance Project Plan as required under Part 2.1, "Quality Assurance Project Plan".

1.5.10 For ambient monitoring, the permittee must use a sufficiently sensitive Environmental Protection Agency (EPA) approved test method that quantifies the level of pollutants to a level lower than applicable limits or water quality standards or use the most sensitive Title 40 Code of Federal Regulations (CFR) Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), adopted by reference at 18 AAC 83.010(f) test method available.

1.5.11 Receiving water monitoring results must be submitted to DEC with the DMR for the month following sample collection. At a minimum, the report must include:

- 1.5.11.1 Dates of sample collection and analyses;
- 1.5.11.2 Results of sample analyses; and
- 1.5.11.3 Relevant quality assurance/quality control (QA/QC) information.

1.5.12 All monitoring results must be included in the annual pollution prevention report of permit section 2.2.6.1 and submitted with the January DMR for the next year. The report must include a presentation of the analytical results and an evaluation of the results. The evaluation must include a comparison of background and boundary chronic mixing zone monitoring results (to show any differences) and a comparison of monitoring results for each station over time (to show any trends). The report may reference the monthly reports for QA/QC information.

- 1.5.13 Prior to commencement of discharge operations, if the permittee demonstrates (and the Department agrees) through the TRC treatability study (Section 2.2.7.1) that dechlorination will not be installed and implemented to remove TRC from the effluent, the permittee must conduct the following ambient monitoring requirements:
- 1.5.13.1 Monitoring stations must be established in Cook Inlet at the following locations:
- 1.5.13.1.1 A background station at a point representative of the quality of Cook Inlet, not influenced by the facility's discharge;
 - 1.5.13.1.2 Three stations shall be established near the outfall effluent discharge. One station shall be located along the mixing zone centerline, one station shall be located on the seaward boundary of the mixing zone, one station shall be located at the landward boundary of the mixing zone;
 - 1.5.13.1.3 Three stations shall be established at the upstream boundary of the mixing zone. One station shall be located along the mixing zone centerline, one station shall be located on the seaward boundary of the mixing zone, one station shall be located at the landward boundary of the mixing zone;
 - 1.5.13.1.4 Three stations shall be established at the downstream boundary of the mixing zone. One station shall be located along the mixing zone centerline, one station shall be located on the seaward boundary of the mixing zone, one station shall be located at the landward boundary of the mixing zone;
 - 1.5.13.1.5 Monitoring at each station described in sections 1.5.13.1.1 through 1.5.13.1.4 shall occur at three depths; the ambient surface, at a depth mid-way between the surface and the ocean floor, and within one meter of the ambient ocean floor.
 - 1.5.13.1.6 Monitoring shall meet all criteria in sections 1.5.4 through 1.5.12 for the frequency and parameters listed in Table 4 for a period of three years.
 - 1.5.13.1.7 The permittee shall sample during varying tidal conditions. If during one quarter, the permittee samples during slack tide conditions the permittee shall sample during maximum flooding or maximum ebb tidal currents during the next quarter. Sampling events shall rotate between tidal conditions each quarter.
 - 1.5.13.1.8 Monitoring locations shall be submitted to the Department for approval prior to commencement of discharge operations.

2.0 SPECIAL CONDITIONS

2.1 Quality Assurance Project Plan

- 2.1.1 The permittee must develop a quality assurance project plan (QAPP) for all monitoring required by this permit. The QAPP must be completed and implemented within 90 days of the effective date of this permit. Any existing QAPP may be modified under this Part.
- 2.1.2 The Permittee must submit a letter notifying DEC that the QAPP has been completed and implemented within 90 days of the effective date of this permit.
- 2.1.3 The QAPP must be designed to assist in planning for the collection and analysis of effluent and receiving water samples in support of the permit and to help explain data anomalies whenever they occur.
- 2.1.4 Throughout all sample collection and analysis activities, the permittee must use DEC-approved QA/QC and chain-of-custody procedures, as described in the *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5). The QAPP must be prepared in the format specified in these documents.

2.1.5 At a minimum, a QAPP must include:

- 2.1.5.1 Details on number of samples, detailed sampling locations, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements;
 - 2.1.5.2 A map indicating the location of each sampling point;
 - 2.1.5.3 Qualification and training of personnel;
 - 2.1.5.4 Specifications for the collection and analysis of quality assurance samples for each sampling event, including matrix spiked and duplicate samples and analysis of field transfer blanks (sample blanks); and
 - 2.1.5.5 Name(s), address(es), and telephone number(s) of the laboratories used by or proposed to be used by the permittee.
- 2.1.6 The permittee must amend the QAPP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAPP.
- 2.1.7 Copies of the QAPP must be kept on site and made available to DEC upon request.

2.2 Best Management Practices Plan

- 2.2.1 Objective. The objective of the Best Management Practices (BMP) Plan is to describe and document procedures to prevent or minimize the generation and the potential for release of pollutants from the facility to the lands and waters of the U.S. through normal and ancillary activities.
- 2.2.2 Development and Implementation Schedule. The permittee must develop and implement a BMP Plan which achieves the objectives and the specific requirements listed below. The permittee must submit written notice to DEC that the plan has been developed and implemented within 180 days of the effective date of the permit. Any existing BMP Plans may be modified for compliance with this Part. The permittee must implement provisions of the plan as conditions of this permit within 180 days of the effective date of this permit.
- 2.2.3 Elements of the BMP Plan. The BMP Plan must be consistent with the objectives above and the general guidance contained in *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004, October 1993) or any subsequent revision to the guidance document.
- 2.2.3.1 BMP Plan Components. The BMP Plan must include, at a minimum, procedures that address the following items:
- 2.2.3.1.1 Statement of BMP Policy. The BMP Plan must include a statement of management commitment to provide the necessary financial, staff, equipment, and training resources to develop and implement the BMP Plan on a continuing basis.
 - 2.2.3.1.2 The discharge of spilled waste products through the outfall line is prohibited.
 - 2.2.3.1.3 The permittee must recover spilled or diverted process chemicals, return such spilled or diverted process chemicals to the process to the maximum extent practicable, or route such material to the wastewater treatment system at a rate that does not disrupt the treatment system.
 - 2.2.3.1.4 The permittee must ensure that all chemical transfer and process operation areas are adequately constructed to prevent leaks and spills from reaching unpaved areas of the plant.
 - 2.2.3.1.5 The permittee must establish a program to identify, track, and immediately repair leaking equipment items. This program must include:

- 2.2.3.1.5.1 Monthly visual inspections of storage tanks and drums, as well as transfer and process equipment;
- 2.2.3.1.5.2 Immediate repair of leaking equipment, when possible. Leaking equipment items that cannot be repaired during normal operations must be identified, a temporary means for mitigating the leaks must be provided, and the leaking equipment items repaired during the next maintenance outage;
- 2.2.3.1.5.3 Identification of conditions under which production will be curtailed or halted to repair leaking equipment items or to prevent leaks and spills; and
- 2.2.3.1.5.4 A means for tracking repairs over time to identify those equipment items where upgrade or replacement may be warranted based on frequency and severity of leaks, spills, or failures.
- 2.2.3.1.6 The permittee must prepare a brief report that evaluates each toxic substance spill and any intentional diversion of toxic substances. These are considered unauthorized discharges under the permit. The report must describe the equipment involved, circumstance, corrective actions taken and plans to prevent reoccurrence.
- 2.2.3.1.7 The permittee must conduct initial and refresher training of operators, maintenance personnel, and other technical and supervisory personnel who have responsibility for operating, maintaining, or supervising the operation and maintenance of equipment items. The refresher training must be conducted at least annually and the training program must be documented.
- 2.2.3.1.8 The BMP plan shall include a Pollution Prevention (P2) Plan component, including requirements in permit section 2.2.6, for incorporating pollution prevention into Alaska Kenai Nitrogen Operations activities that discharge (or have the potential to discharge) into waters of United States. The framework shall include:
- 2.2.3.1.9 A written policy of management support and commitment for planning and implementation of pollution prevention goals developed during the planning process;
- 2.2.3.1.10 The methodology for considering the technical and economic feasibility of a proposed pollution prevention option;
- 2.2.3.1.11 A statement of specific and measurable pollution prevention objectives, goals, and priorities for Alaska Kenai Nitrogen Operations. Standards of measure may be quantitative or qualitative depending on the type or objective, priority, or goal;
- 2.2.3.1.12 Identification of any significant toxic and/or hazardous products and waste streams; the processes which use these products or generate these waste streams; and opportunities for eliminating or reducing the use of these products and the generation of these waste streams;
- 2.2.3.1.13 Evaluation and prioritization of pollution prevention and reduction opportunities; and
- 2.2.3.1.14 Establishment of a schedule for implementing technically and economically feasible pollution prevention opportunities.
- 2.2.4 Amendment of BMP Plan.
 - 2.2.4.1 The permittee must amend its BMP plan whenever there is a change in the design, construction, operation, or maintenance of the facility that materially affects the potential for leaks or spills of toxic substances;
 - 2.2.4.2 The permittee must amend its BMP plan whenever it is found to be ineffective at preventing or minimizing the generation and the potential for the release of pollutants from the facility to the waters of the United States through normal operations and ancillary activities.

2.2.4.3 The BMP plan and any amendments must be reviewed by the senior technical manager and approved and signed by the manager. Any person signing the plan or its amendments must certify to DEC, under penalty of law, that the plan and its amendments have been prepared in accordance with good engineering practices and in accordance with 40 CFR § 430.03 [as adopted by reference at 18 AAC 83.010(g)(3)]. The permittee is not required to obtain approval from DEC of the BMP plan or any amendments.

2.2.5 Documentation and Annual Review.

2.2.5.1 The permittee shall maintain on its premises a complete copy of the current BMP plan, and records and must make the plan and records available to DEC for review upon request.

2.2.5.2 The permittee shall submit a letter to DEC notifying that the BMP plan has been completed and implemented within 180 days of the effective date of this permit.

2.2.5.3 The permittee shall maintain the following records for three years from the date they are created:

2.2.5.3.1 Records tracking the repairs performed in accordance with the repair program described in paragraph 2.2.3.1.5 of this Part;

2.2.5.3.2 Records of monitoring required by paragraph 2.2.3.1.6 of this Part

2.2.5.3.3 Reports prepared in accordance with paragraph 2.2.3.1.7 of this Part; and

2.2.5.3.4 Records of initial and refresher training conducted in accordance with paragraph 2.2.3.1.8 of this Part;

2.2.5.4 The facility operations and environmental staff and the plant manager shall review and endorse the BMP plan at least annually. The endorsement of the plan shall be via a certified statement, by the plant manager, that the above review has been completed and that the BMP plan fulfills the requirements set forth in this permit. The endorsement shall also identify the type and quantity of toxic and/or hazardous products reduced or eliminated and the type and quality of waste streams reduced or eliminated. The certified statement shall be submitted to DEC with the January DMR for each year the facility is operating.

2.2.6 Specific Best Management Practices. The BMP Plan must establish specific BMPs or other measures to achieve the objectives under Part 2.2 which ensure that the following specific requirements are met:

2.2.6.1 Annual Pollution Prevention (P2) Reports: The Permittee shall prepare annual P2 reports on the status of efforts to meet stated P2 Plan objectives, goals, and priorities, and submit the report to DEC. The first progress report shall be due two years from the effective date of the permit. Subsequent reports shall be due annually on the anniversary of the effective date. The P2 reports shall:

2.2.6.1.1 Identify progress towards meeting P2 Plan objectives, goals, and priorities. Problems encountered and/or highlights of efforts to prevent pollution shall also be identified;

2.2.6.1.2 Describe P2 projects implemented and for each project, to the extent possible (considering technical and economic feasibility) identify:

2.2.6.1.3 The type and quantity of toxic and/or hazardous products reduced or eliminated; and

2.2.6.1.4 The type and quantity of waste streams reduced or eliminated

2.2.7 The permittee must investigate methods to reduce or eliminate total residual chlorine from the effluent to the extent practicable.

2.2.7.1 The investigation, hereby called TRC Treatability Study, shall be included as part of the BMP plan and will be required to adhere to the following permit sections:

- 2.2.7.1.1 Any amendments to the BMP plan as a result of the TRC Treatability Study shall follow requirements of permit section 2.2.4;
- 2.2.7.1.2 The TRC Treatability Study must adhere to requirements listed in permit section 2.2.3.1.12 and 2.2.6.1; and
- 2.2.7.1.3 The TRC Treatability Study shall adhere to requirements listed in permit section 2.2.5.
- 2.2.7.2 The permittee must submit a report, as a separate standalone document, detailing the results and conclusions from the TRC Treatability Study within one year of the effective date of this permit. At a minimum, the report shall include:
 - 2.2.7.2.1 A description of the dechlorination methods that will be implemented, including timelines for the construction, installation, and final operation of dechlorination methods; or
 - 2.2.7.2.2 Complete information (including capital and operational cost considerations as well as other operational considerations) supporting a determination not to implement dechlorination methods. If dechlorination methods are not recommended to be implemented, the permittee shall describe methods for reducing TRC in the effluent to the extent practicable. DEC will evaluate the report and will either approve or deny it based on its findings.

2.3 Operation and Maintenance Plan

In addition to requirements specified in Appendix A, Part 1.6 of this permit (Proper Operation and Maintenance), by 180 days after the effective date of this permit, the permittee shall develop and implement an operation and maintenance (O & M) plan for the wastewater treatment facility. The plan shall be retained on site and made available on request to DEC. In addition, the permittee must submit a letter to DEC notifying that an O & M plan has been developed and implemented by 180 days after the effective date of this permit.

2.4 Electronic Reporting (E-Reporting) Rule

The Permittee is responsible for electronically submitting DMRs and other reports in accordance with 40 CFR §127. The start dates for e-reporting are provided in 40 CFR §127.16. DEC has established a website at <http://dec.alaska.gov/water/Compliance/EReportingRule.htm> that contains general information. As DEC implements the E-Reporting Rule, more information will be posted on this webpage. The permittee will be further notified by DEC in the future about how to implement the conditions in 40 CFR §127.

2.5 Removed Substances

Collected screenings, grit, solids, scum, and other facility residuals, or other pollutants removed in the course of treatment or control of water and wastewaters shall be disposed of in a Department approved manner and method in accordance with 18 AAC 60, such as to prevent any pollution from such materials from entering navigable waters.

2.6 Air and Land Releases

The permittee must not place, deposit, or allow to be placed or deposited on the premises, any material which may produce, cause or contribute to the spread of disease, create a safety hazard or in any way endanger the health of the public.

APPENDIX A

STANDARD CONDITIONS

APDES PERMIT

NONDOMESTIC DISCHARGES

TABLE OF CONTENTS

| | | |
|------------|--|-------------|
| 1.0 | Standard Conditions Applicable to All Permits | A-1 |
| 1.1 | Contact Information and Addresses | A-1 |
| 1.2 | Duty to Comply | A-1 |
| 1.3 | Duty to Reapply | A-2 |
| 1.4 | Need to Halt or Reduce Activity Not a Defense | A-2 |
| 1.5 | Duty to Mitigate | A-2 |
| 1.6 | Proper Operation and Maintenance | A-2 |
| 1.7 | Permit Actions | A-2 |
| 1.8 | Property Rights | A-2 |
| 1.9 | Duty to Provide Information | A-2 |
| 1.10 | Inspection and Entry | A-3 |
| 1.11 | Monitoring and Records | A-3 |
| 1.12 | Signature Requirement and Penalties | A-4 |
| 1.13 | Proprietary or Confidential Information | A-5 |
| 1.14 | Oil and Hazardous Substance Liability | A-5 |
| 1.15 | Cultural and Paleontological Resources | A-6 |
| 1.16 | Fee | A-6 |
| 1.17 | Other Legal Obligations | A-6 |
| 2.0 | Special Reporting Obligations | A-6 |
| 2.1 | Planned Changes | A-6 |
| 2.2 | Anticipated Noncompliance | A-6 |
| 2.3 | Transfers | A-7 |
| 2.4 | Compliance Schedules | A-7 |
| 2.5 | Corrective Information | A-7 |
| 2.6 | Bypass of Treatment Facilities | A-7 |
| 2.7 | Upset Conditions | A-8 |
| 2.8 | Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges | A-8 |
| 3.0 | Monitoring, Recording, and Reporting Requirements | A-9 |
| 3.1 | Representative Sampling | A-9 |
| 3.2 | Reporting of Monitoring Results | A-9 |
| 3.3 | Additional Monitoring by Permittee | A-9 |
| 3.4 | Twenty-four Hour Reporting | A-9 |
| 3.5 | Other Noncompliance Reporting | A-10 |
| 4.0 | Penalties for Violations of Permit Conditions | A-10 |
| 4.1 | Civil Action | A-10 |
| 4.2 | Injunctive Relief | A-11 |
| 4.3 | Criminal Action | A-11 |
| 4.4 | Other Fines | A-11 |

Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an individual APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements. Appendix A, Standard Conditions is an integral and enforceable part of the permit. Failure to comply with a Standard Condition in this Appendix constitutes a violation of the permit and is subject to enforcement.

1.0 Standard Conditions Applicable to All Permits

1.1 Contact Information and Addresses

1.1.1 Permitting Program

Documents, reports, and plans required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone (907) 269-6285
Fax (907) 269-3487
Email: DEC.WQPermit@alaska.gov

1.1.2 Compliance and Enforcement Program

Documents and reports required under the permit and Appendix A relating to compliance are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

1.2 Duty to Comply

A permittee shall comply with all conditions of the permittee's APDES permit. Any permit noncompliance constitutes a violation of 33 U.S.C 1251-1387 (Clean Water Act) and state law and is grounds for enforcement action including termination, revocation and reissuance, or modification of a permit, or denial of a permit renewal application. A permittee shall comply with effluent standards or prohibitions established under 33 U.S.C. 1317(a) for toxic pollutants within the time provided in the regulations that establish those effluent standards or prohibitions even if the permit has not yet been modified to incorporate the requirement.

1.3 Duty to Reapply

If a permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. In accordance with 18 AAC 83.105(b), a permittee with a currently effective permit shall reapply by submitting a new application at least 180 days before the existing permit expires, unless the Department has granted the permittee permission to submit an application on a later date. However, the Department will not grant permission for an application to be submitted after the expiration date of the existing permit.

1.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, a permittee may not assert as a defense that compliance with the conditions of the permit would have made it necessary for the permittee to halt or reduce the permitted activity.

1.5 Duty to Mitigate

A permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

1.6 Proper Operation and Maintenance

1.6.1 A permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances that the permittee installs or uses to achieve compliance with the conditions of the permit. The permittee's duty to operate and maintain properly includes using adequate laboratory controls and appropriate quality assurance procedures. However, a permittee is not required to operate back-up or auxiliary facilities or similar systems that a permittee installs unless operation of those facilities is necessary to achieve compliance with the conditions of the permit.

1.6.2 Operation and maintenance records shall be retained and made available at the site.

1.7 Permit Actions

A permit may be modified, revoked and reissued, or terminated for cause as provided in 18 AAC 83.130. If a permittee files a request to modify, revoke and reissue, or terminate a permit, or gives notice of planned changes or anticipated noncompliance, the filing or notice does not stay any permit condition.

1.8 Property Rights

A permit does not convey any property rights or exclusive privilege.

1.9 Duty to Provide Information

A permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.

1.10 Inspection and Entry

A permittee shall allow the Department, or an authorized representative, including a contractor acting as a representative of the Department, at reasonable times and on presentation of credentials establishing authority and any other documents required by law, to:

- 1.10.1 Enter the premises where a permittee's regulated facility or activity is located or conducted, or where permit conditions require records to be kept;
- 1.10.2 Have access to and copy any records that permit conditions require the permittee to keep;
- 1.10.3 Inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under a permit; and
- 1.10.4 Sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance or as otherwise authorized by 33 U.S.C. 1251-1387 (Clean Water Act).

1.11 Monitoring and Records

A permittee must comply with the following monitoring and recordkeeping conditions:

- 1.11.1 Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.
- 1.11.2 The permittee shall retain records in Alaska of all monitoring information for at least three years, or longer at the Department's request at any time, from the date of the sample, measurement, report, or application. Monitoring records required to be kept include:
 - 1.11.2.1 All calibration and maintenance records,
 - 1.11.2.2 All original strip chart recordings or other forms of data approved by the Department for continuous monitoring instrumentation,
 - 1.11.2.3 All reports required by a permit,
 - 1.11.2.4 Records of all data used to complete the application for a permit,
 - 1.11.2.5 Field logbooks or visual monitoring logbooks,
 - 1.11.2.6 Quality assurance chain of custody forms,
 - 1.11.2.7 Copies of discharge monitoring reports, and
 - 1.11.2.8 A copy of this APDES permit.
- 1.11.3 Records of monitoring information must include:
 - 1.11.3.1 The date, exact place, and time of any sampling or measurement;
 - 1.11.3.2 The name(s) of any individual(s) who performed the sampling or measurement(s);
 - 1.11.3.3 The date(s) and time any analysis was performed;
 - 1.11.3.4 The name(s) of any individual(s) who performed any analysis;
 - 1.11.3.5 Any analytical technique or method used; and
 - 1.11.3.6 The results of the analysis.

1.11.4 Monitoring Procedures

Analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010, for pollutants with approved test procedures, and using test procedures specified in the permit for pollutants without approved methods.

1.12 Signature Requirement and Penalties

- 1.12.1 Any application, report, or information submitted to the Department in compliance with a permit requirement must be signed and certified in accordance with 18 AAC 83.385. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under a permit, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be subject to penalties under 33 U.S.C. 1319(c)(4), AS 12.55.035(c)(1)(B), (c)(2) and (c)(3), and AS 46.03.790(g).
- 1.12.2 In accordance with 18 AAC 83.385, an APDES permit application must be signed as follows:
 - 1.12.2.1 For a corporation, a responsible corporate officer shall sign the application; in this subsection, a responsible corporate officer means:
 - 1.12.2.1.1 A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - 1.12.2.1.2 The manager of one of more manufacturing, production, or operating facilities, if
 - 1.12.2.1.2.1 The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;
 - 1.12.2.1.2.2 The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
 - 1.12.2.1.2.3 Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - 1.12.2.2 For a partnership or sole proprietorship, by the general partner or the proprietor, respectively, shall sign the application.
 - 1.12.2.3 For a municipality, state, federal, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means:
 - 1.12.2.3.1 The chief executive officer of the agency; or
 - 1.12.2.3.2 A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.
- 1.12.3 Any report required by an APDES permit, and a submittal with any other information requested by the Department, must be signed by a person described in Appendix A, Part 1.12.2, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1.12.3.1 The authorization is made in writing by a person described in Appendix A, Part 1.12.2;

- 1.12.3.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility; or an individual or position having overall responsibility for environmental matters for the company; and
- 1.12.3.3 The written authorization is submitted to the Department to the Permitting Program address in Appendix A, Part 1.1.1.
- 1.12.4 If an authorization under Appendix A, Part 1.12.3 is no longer effective because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Appendix A, Part 1.12.3 must be submitted to the Department before or together with any report, information, or application to be signed by an authorized representative.
- 1.12.5 Any person signing a document under Appendix A, Part 1.12.2 or Part 1.12.3 shall certify as follows:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1.13 Proprietary or Confidential Information

- 1.13.1 A permit applicant or permittee may assert a claim of confidentiality for proprietary or confidential business information by stamping the words "confidential business information" on each page of a submission containing proprietary or confidential business information. The Department will treat the stamped submissions as confidential if the information satisfies the test in 40 CFR §2.208, adopted by reference at 18 AAC 83.010, and is not otherwise required to be made public by state law.
- 1.13.2 A claim of confidentiality under Appendix A, Part 1.13.1 may not be asserted for the name and address of any permit applicant or permittee, a permit application, a permit, effluent data, sewage sludge data, and information required by APDES or NPDES application forms provided by the Department, whether submitted on the forms themselves or in any attachments used to supply information required by the forms.
- 1.13.3 A permittee's claim of confidentiality authorized under Appendix A, Part 1.13.1 is not waived if the Department provides the proprietary or confidential business information to the EPA or to other agencies participating in the permitting process. The Department will supply any information obtained or used in the administration of the state APDES program to the EPA upon request under 40 CFR §123.41, as revised as of July 1, 2005. When providing information submitted to the Department with a claim of confidentiality to the EPA, the Department will notify the EPA of the confidentiality claim. If the Department provides the EPA information that is not claimed to be confidential, the EPA may make the information available to the public without further notice.

1.14 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any action or relieve a permittee

from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under state laws addressing oil and hazardous substances.

1.15 Cultural and Paleontological Resources

If cultural or paleontological resources are discovered because of this disposal activity, work that would disturb such resources is to be stopped, and the Office of History and Archaeology, a Division of Parks and Outdoor Recreation of the Alaska Department of Natural Resources (<http://www.dnr.state.ak.us/parks/oha/>), is to be notified immediately at (907) 269-8721.

1.16 Fee

A permittee must pay the appropriate permit fee described in 18 AAC 72.

1.17 Other Legal Obligations

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted and all plan approvals implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

2.0 Special Reporting Obligations

2.1 Planned Changes

- 2.1.1 The permittee shall give notice to the Department as soon as possible of any planned physical alteration or addition to the permitted facility if:
 - 2.1.1.1 The alteration or addition may make the facility a “new source” under one or more of the criteria in 18 AAC 83.990(44); or
 - 2.1.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged if those pollutants are not subject to effluent limitations in the permit or to notification requirements under 18 AAC 83.610.
- 2.1.2 If the proposed changes are subject to plan review, then the plans must be submitted at least 30 days before implementation of changes (see 18 AAC 15.020 and 18 AAC 72 for plan review requirements). Written approval is not required for an emergency repair or routine maintenance.
- 2.1.3 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.2 Anticipated Noncompliance

- 2.2.1 A permittee shall give seven days’ notice to the Department before commencing any planned change in the permitted facility or activity that may result in noncompliance with permit requirements.
- 2.2.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.3 Transfers

- 2.3.1 A permittee may not transfer a permit for a facility or activity to any person except after notice to the Department in accordance with 18 AAC 83.150. The Department may modify or revoke and reissue the permit to change the name of the permittee and incorporate such other requirements under 33 U.S.C. 1251-1387 (Clean Water Act) or state law.
- 2.3.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.4 Compliance Schedules

- 2.4.1 A permittee must submit progress or compliance reports on interim and final requirements in any compliance schedule of a permit no later than 14 days following the scheduled date of each requirement.
- 2.4.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.5 Corrective Information

- 2.5.1 If a permittee becomes aware that it failed to submit a relevant fact in a permit application or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit the relevant fact or the correct information.
- 2.5.2 Information must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.6 Bypass of Treatment Facilities

2.6.1 Prohibition of Bypass

Bypass is prohibited. The Department may take enforcement action against a permittee for any bypass, unless:

- 2.6.1.1 The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- 2.6.1.2 There were no feasible alternatives to the bypass, including use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. However, this condition is not satisfied if the permittee, in the exercise of reasonable engineering judgment, should have installed adequate back-up equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
- 2.6.1.3 The permittee provides notice to the Department of a bypass event in the manner, as appropriate, under Appendix A, Part 2.6.2.

2.6.2 Notice of bypass

- 2.6.2.1 For an anticipated bypass, the permittee submits notice at least 10 days before the date of the bypass. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the conditions of Appendix A, Parts 2.6.1.1 and 2.6.1.2.
 - 2.6.2.2 For an unanticipated bypass, the permittee submits 24-hour notice, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting.
 - 2.6.2.3 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.
- 2.6.3 Notwithstanding Appendix A, Part 2.6.1, a permittee may allow a bypass that:

- 2.6.3.1 Does not cause an effluent limitation to be exceeded, and
- 2.6.3.2 Is for essential maintenance to assure efficient operation.

2.7 Upset Conditions

- 2.7.1 In any enforcement action for noncompliance with technology-based permit effluent limitations, a permittee may claim upset as an affirmative defense. A permittee seeking to establish the occurrence of an upset has the burden of proof to show that the requirements of Appendix A, Part 2.7.2 are met.
- 2.7.2 To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:
 - 2.7.2.1 An upset occurred and the permittee can identify the cause or causes of the upset;
 - 2.7.2.2 The permitted facility was at the time being properly operated;
 - 2.7.2.3 The permittee submitted 24-hour notice of the upset, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting; and
 - 2.7.2.4 The permittee complied with any mitigation measures required under 18 AAC 83.405(e) and Appendix A, Part 1.5, Duty to Mitigate.
- 2.7.3 Any determination made in administrative review of a claim that noncompliance was caused by upset, before an action for noncompliance is commenced, is not final administrative action subject to judicial review.

2.8 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges

- 2.8.1 In addition to the reporting requirements under 18 AAC 83.410, an existing manufacturing, commercial, mining, and silvicultural discharger shall notify the Department as soon as that discharger knows or has reason to believe that any activity has occurred or will occur that would result in:
 - 2.8.1.1 The discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - 2.8.1.1.1 One hundred micrograms per liter (100 µg/L);
 - 2.8.1.1.2 Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile, 500 micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol, and one milligram per liter (1 mg/L) for antimony;
 - 2.8.1.1.3 Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or
 - 2.8.1.1.4 The level established by the Department in accordance with 18 AAC 83.445.
 - 2.8.1.2 Any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - 2.8.1.2.1 Five hundred micrograms per liter (500 µg/L);
 - 2.8.1.2.2 One milligram per liter (1 mg/L) for antimony;

- 2.8.1.2.3 Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or
- 2.8.1.2.4 The level established by the Department in accordance with 18 AAC 83.445.

3.0 Monitoring, Recording, and Reporting Requirements

3.1 Representative Sampling

A permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into the receiving waters. Samples and measurements must be representative of the volume and nature of the monitored activity or discharge.

3.2 Reporting of Monitoring Results

The permittee shall summarize monitoring results on the annual report form or approved equivalent. The permittee shall submit its annual report at the interval specified in the permit. The permittee shall sign and certify all annual reports and other reports in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirement and Penalties. The permittee shall submit the legible originals of these documents to the ADEC Compliance and Enforcement Program at the address in Appendix A, Part 1.1.2.

3.3 Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than the permit requires using test procedures approved in 40 CFR Part 136, adopted by reference at 18 AAC 83.010, or as specified in this permit, the results of that additional monitoring must be included in the calculation and reporting of the data submitted in the DMR or annual report required by Appendix A, Part 3.2. All limitations that require averaging of measurements must be calculated using an arithmetic means unless the Department specifies another method in the permit. Upon request by the Department, the permittee must submit the results of any other sampling and monitoring regardless of the test method used.

3.4 Twenty-four Hour Reporting

A permittee shall report any noncompliance event that may endanger health or the environment as follows:

- 3.4.1 A report must be made:
 - 3.4.1.1 Orally within 24 hours after the permittee becomes aware of the circumstances, and
 - 3.4.1.2 In writing within five days after the permittee becomes aware of the circumstances.
- 3.4.2 A report must include the following information:
 - 3.4.2.1 A description of the noncompliance and its causes, including the estimated volume or weight and specific details of the noncompliance;
 - 3.4.2.2 The period of noncompliance, including exact dates and times;
 - 3.4.2.3 If the noncompliance has not been corrected, a statement regarding the anticipated time the noncompliance is expected to continue; and
 - 3.4.2.4 Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- 3.4.3 An event that must be reported within 24 hours includes:
- 3.4.3.1 An unanticipated bypass that exceeds any effluent limitation in the permit (see Appendix A, Part 2.6, Bypass of Treatment Facilities).
 - 3.4.3.2 An upset that exceeds any effluent limitation in the permit (see Appendix A, Part 2.7, Upset Conditions).
 - 3.4.3.3 A violation of a maximum daily discharge limitation for any of the pollutants listed in the permit as requiring 24-hour reporting.
- 3.4.4 The Department may waive the written report on a case-by-case basis for reports under Appendix A, Part 3.4 if the oral report has been received within 24 hours of the permittee becoming aware of the noncompliance event.
- 3.4.5 The permittee may satisfy the written reporting submission requirements of Appendix A, Part 3.4 by submitting the written report via e-mail, if the following conditions are met:
- 3.4.5.1 The Noncompliance Notification Form or equivalent form is used to report the noncompliance;
 - 3.4.5.2 The written report includes all the information required under Appendix A, Part 3.4.2;
 - 3.4.5.3 The written report is properly certified and signed in accordance with Appendix A, Parts 1.12.3 and 1.12.5.;
 - 3.4.5.4 The written report is scanned as a PDF (portable document format) document and transmitted to the Department as an attachment to the e-mail; and
 - 3.4.5.5 The permittee retains in the facility file the original signed and certified written report and a printed copy of the conveying email.
- 3.4.6 The e-mail and PDF written report will satisfy the written report submission requirements of this permit provided the e-mail is received by the Department within five days after the time the permittee becomes aware of the noncompliance event and the e-mail and written report satisfy the criteria of Part 3.4.5. The e-mail address to report noncompliance is:
dec-wqreporting@alaska.gov

3.5 Other Noncompliance Reporting

A permittee shall report all instances of noncompliance not required to be reported under Appendix A, Parts 2.4 (Compliance Schedules), 3.3 (Additional Monitoring by Permittee), and 3.4 (Twenty-four Hour Reporting) at the time the permittee submits monitoring reports under Appendix A, Part 3.2. (Reporting of Monitoring Results). A report of noncompliance under this part must contain the information listed in Appendix A, Part 3.4.2 and be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

4.0 Penalties for Violations of Permit Conditions

Alaska laws allow the State to pursue both civil and criminal actions concurrently. The following is a summary of Alaska law. Permittees should read the applicable statutes for further substantive and procedural details.

4.1 Civil Action

Under AS 46.03.760(e), a person who violates or causes or permits to be violated a regulation, a lawful

order of the Department, or a permit, approval, or acceptance, or term or condition of a permit, approval or acceptance issued under the program authorized by AS 46.03.020 (12) is liable, in a civil action, to the State for a sum to be assessed by the court of not less than \$500 nor more than \$100,000 for the initial violation, nor more than \$10,000 for each day after that on which the violation continues, and that shall reflect, when applicable:

- 4.1.1 Reasonable compensation in the nature of liquated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;
- 4.1.2 Reasonable costs incurred by the State in detection, investigation, and attempted correction of the violation;
- 4.1.3 The economic savings realized by the person in not complying with the requirements for which a violation is charged; and
- 4.1.4 The need for an enhanced civil penalty to deter future noncompliance.

4.2 Injunctive Relief

- 4.2.1 Under AS 46.03.820, the Department can order an activity presenting an imminent or present danger to public health or that would be likely to result in irreversible damage to the environment be discontinued. Upon receipt of such an order, the activity must be immediately discontinued.
- 4.2.2 Under AS 46.03.765, the Department can bring an action in Alaska Superior Court seeking to enjoin ongoing or threatened violations for Department-issued permits and Department statutes and regulations.

4.3 Criminal Action

Under AS 46.03.790(h), a person is guilty of a Class A misdemeanor if the person negligently:

- 4.3.1 Violates a regulation adopted by the Department under AS 46.03.020(12);
- 4.3.2 Violates a permit issued under the program authorized by AS 46.03.020(12);
- 4.3.3 Fails to provide information or provides false information required by a regulation adopted under AS 46.03.020(12);
- 4.3.4 Makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with a permit issued under or a regulation adopted under AS 46.03.020(12); or
- 4.3.5 Renders inaccurate a monitoring device or method required to be maintained by a permit issued or under a regulation adopted under AS 46.03.020(12).

4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not an organization may be sentenced to pay a fine of not more than \$10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) \$200,00; (2) three times the pecuniary gain realized by the defendant as a result of the offense; or (3) three times the pecuniary damage or loss caused by the defendant to another, or the property of another, as a result of the offense (AS 12.55.035(c)(B), (c)(2), and (c)(3)).

Appendix B

Acronyms

APPENDIX B

The following acronyms are common terms that may be found in an Alaska Pollutant Discharge Elimination System (APDES) permit.

| | |
|-----------|--|
| 18 AAC 15 | Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 15: Administrative Procedures |
| 18 AAC 70 | Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards |
| 18 AAC 72 | Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 72: Wastewater Disposal |
| 18 AAC 83 | Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 83: Alaska Pollutant Discharge Elimination System |

All chapters of Alaska Administrative Code, Title 18 are available at the Alaska Administrative Code database <http://www.legis.state.ak.us/cgi-bin/folioisa.dll/aac>

| | |
|------------------|--|
| 40 CFR | Code of Federal Regulations Title 40: Protection of Environment |
| AAC | Alaska Administrative Code |
| ADEC | Alaska Department of Environmental Conservation |
| As | Arsenic |
| APDES | Alaska Pollutant Discharge Elimination System |
| AS | Alaska Statutes |
| AS 46.03 | Alaska Statutes Title 46, Chapter 03: Environmental Conservation. Available at http://www.legis.state.ak.us/default.htm |
| BOD ₅ | Biochemical Oxygen Demand, 5-day |
| BMP | Best Management Practice |
| Cu | Copper |
| CWA | Clean Water Act |
| DMR | Discharge Monitoring Report |
| DO | Dissolved Oxygen |
| EPA | U.S. Environmental Protection Agency |
| GPD or gpd | Gallons per day |
| GPY or gpy | Gallons per year |
| IC ₂₅ | Inhibition Concentration 25% |
| LC ₅₀ | Lethal Concentration 50% |
| MDL | Method Detection Limit |
| mg/L | Milligrams per Liter |
| MGD or mgd | Million gallons per day |
| ML | Minimum Level |
| MLLW | Mean Lower Low Water |

APPENDIX B

| | |
|--------|------------------------------------|
| MZ | Mixing Zone |
| N/A | Not Applicable |
| NOEC | No Observed Effect Concentration |
| POTW | Publicly Owned Treatment Works |
| PQL | Practical Quantification Limit |
| QA | Quality Assurance |
| QA/QC | Quality Assurance/Quality Control |
| QAPP | Quality Assurance Project Plan |
| QC | Quality Control |
| RL | Reporting Limit |
| RWC | Receiving Water Concentration |
| SU | Standard Units |
| TIE | Toxicity Identification Evaluation |
| TRC | Total Residual Chlorine |
| TRE | Toxicity Reduction Evaluation |
| TUc | Toxic Unit, Chronic |
| µg/L | Micrograms per Liter |
| U.S.C. | United States Code |
| WQS | Water Quality Standards |
| WWTF | Wastewater Treatment Facility |
| Zn | Zinc |

Appendix C

Definitions

APPENDIX C

The following are common definitions of terms associated with APDES permits. Not all the terms listed may appear in a permit. Consult the footnote references for a complete list of terms and definitions.

| | |
|--|--|
| Administrator ^a | Means the Administrator of the EPA or an authorized representative |
| Alaska Pollutant Discharge Elimination System (APDES) ^a | Means the state's program, approved by EPA under 33 U.S.C. 1342(b), for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under 33 U.S.C. 1317, 1328, 1342, and 1345 |
| Annual | Means once per calendar year |
| Aquaculture ^b | Means the cultivation of aquatic plants or animals for human use or consumption |
| Average | Means an arithmetic mean obtained by adding quantities and dividing the sum by the number of quantities |
| Average Monthly Discharge Limitation ^a | Means the highest allowable average of "daily discharges" over a calendar month calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured for that month |
| Best Management Practices (BMPs) ^a | Means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas. |
| Boundary ^b | Means line or landmark that serves to clarify, outline, or mark a limit, border, or interface |
| Bypass ^a | Means the intentional diversion of waste streams from any portion of a treatment facility |
| Clean Water Act (CWA) ^a | Means the federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972 |
| Color ^b | Means the condition that results in the visual sensations of hue and intensity as measured after turbidity is removed |
| Commissioner ^a | Means the commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee |
| Composite Samples | Composite samples must consist of at least eight equal volume grab samples. 24 hour composite sample means a combination of at least eight discrete samples of equal volume collected at equal time intervals over a 24-hour period at the same location. A "flow proportional composite" sample means a combination of at least eight discrete samples collected at equal time intervals over a 24-hour period with each sample |

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

APPENDIX C

volume proportioned according to the flow volume. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

| | |
|---------------------------------------|--|
| Contact Recreation ^b | Means activities in which there is direct and intimate contact with water. Contact recreation includes swimming, diving, and water skiing. Contact recreation does not include wading. |
| Cooling Water | Means once-through non-contact cooling water |
| Criterion ^b | Means a set concentration or limit of a water quality parameter that, when not exceeded, will protect an organism, a population of organisms, a community of organisms, or a prescribed water use with a reasonable degree of safety. A criterion might be a narrative statement instead of a numerical concentration or limit. |
| Daily Discharge ^a | Means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants measured in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with a limitation expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day. |
| Datum | A datum defines the position of the spheroid, a mathematical representation of the earth, relative to the center of the earth. It provides a frame of reference for measuring locations on the surface of the earth by defining the origin and orientation of latitude and longitude lines. |
| Department ^a | Means the Alaska Department of Environmental Conservation |
| Design Flow ^a | Means the wastewater flow rate that the plant was designed to handle |
| Director ^a | Means the commissioner or the commissioner’s designee assigned to administer the APDES program or a portion of it, unless the context identifies an EPA director |
| Discharge ^a | When used without qualification, discharge means the discharge of a pollutant |
| Discharge of a Pollutant ^a | Means any addition of any pollutant or combination of pollutants to waters of the United States from any point source or to waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation. Discharge includes any addition of pollutants into waters of the United States from surface runoff that is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person that do not lead to a treatment works; discharges through pipes, sewers, or other conveyances leading into privately owned treatment works; and does not include an addition of pollutants by any indirect discharger. |
| Dissolved Oxygen (DO) ^b | Means the concentration of oxygen in water as determined either by the Winkler (iodometric) method and its modifications or by the membrane electrode method. The oxygen dissolved in water or wastewater and usually expressed in milligrams per |

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

APPENDIX C

| | |
|---|--|
| | liter or percent saturation |
| Domestic Wastewater ^c | Means waterborne human wastes or graywater derived from dwellings, commercial buildings, institutions, or similar structures. "Domestic wastewater" includes the contents of individual removable containers used to collect and temporarily store human wastes. |
| Ecosystem ^b | Means a system made up of a community of animals, plants, and bacteria and the system's interrelated physical and chemical environment |
| Effluent ^b | Means the segment of a wastewater stream that follows the final step in a treatment process and precedes discharge of the wastewater stream to the receiving environment |
| Estimated | Means a way to estimate the discharge volume. Approvable estimations include, but are not limited to, the number of persons per day at the facility, volume of potable water produced per day, lift station run time, etc. |
| Excluded area | Means an area not authorized as a receiving water under a permit |
| Final Approval to Operate | Means the approval that the Department issues after it has reviewed and approved the construction and operation of the engineered wastewater treatment works plans submitted to the Department in accordance with 18 AAC 72.215 through 18 AAC 72.280 or as amended. |
| Geometric Mean | The geometric mean is the N th root of the product of N. All sample results of zero will use a value of 1 for calculation of the geometric mean. Example geometric mean calculation: $\sqrt[4]{12 \times 23 \times 34 \times 990} = 55$. |
| Grab Sample | Means a single instantaneous sample collected at a particular place and time that represents the composition of wastewater only at that time and place |
| Influent | Means untreated wastewater before it enters the first treatment process of a wastewater treatment works |
| Inhibition Concentration 25% (IC ₂₅) ^e | Means the point estimate of the toxicant concentration that would cause 25% reduction in a nonlethal biological measurement of the test organisms, such as reproduction or growth |
| Lethal Concentration 50% (LC ₅₀) ^e | Mean the point estimate of the toxicant that would be lethal to 50% of the test organisms during a specific period |
| Maximum Daily Discharge Limitation ^a | Means the highest allowable "daily discharge" |
| Mean ^b | Means the average of values obtained over a specified period and, for fecal coliform analysis, is computed as a geometric mean |
| Mean Lower Low Water ^b | Means the tidal datum plane of the average of the lower of the two low waters of each day, as would be established by the National Geodetic Survey, at any place subject to tidal influence |
| Measured | Means the actual volume of wastewater discharged using appropriate mechanical or electronic equipment to provide a totalized reading. Measure does not provide a |

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

APPENDIX C

recorded measurement of instantaneous rates.

| | |
|--|---|
| Method Detection Limit (MDL) ^d | Means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte |
| Micrograms per Liter (µg/L) ^b | Means the concentration at which one millionth of a gram (10 ⁻⁶ g) is found in a volume of one liter |
| Milligrams per Liter (mg/L) ^b | Means the concentration at which one thousandth of a gram (10 ⁻³ g) is found in a volume of one liter. It is approximately equal to the unit “parts per million (ppm),” formerly of common use. |
| Minimum Level (ML) ^e | Means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been followed. This level is used as the compliance level if the effluent limit is below it. |
| Mixing Zone ^b | Means a volume of water adjacent to a discharge in which wastes discharged mix with the receiving water |
| Month | Means the time period from the 1 st of a calendar month to the last day in the month |
| Monthly Average | Means the average of daily discharges over a monitoring month calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month |
| No Observed Effect Concentration (NOEC) ^e | Means the highest concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. NOEC is determined using hypothesis testing. |
| Permittee | Means a company, organization, association, entity, or person who is issued a wastewater permit and is responsible for ensuring compliance, monitoring, and reporting as required by the permit |
| pH ^g | Means a measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration in mg/L. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic. |
| Practical Quantification Limit (PQL) ^g | Means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. |
| Primary Contact Recreation | See Contact Recreation |
| Principal Executive Officer ^a | Means the chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of division of the agency |

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

APPENDIX C

| | |
|--|--|
| Pollutant ^a | Means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under 42 U.S.C. 2011), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, or agricultural waste discharged into water |
| Quality Assurance Project Plan (QAPP) | Means a system of procedures, checks, audits, and corrective actions to ensure that all research design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality |
| Quarter | Means the time period of three months based on the calendar year beginning with January |
| Receiving Water Body | Means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state. (See “Waters of the U.S.” at 18 AAC 83.990(77)) |
| Recorded | Means a permanent record using mechanical or electronic equipment to provide a totalized reading, as well as a record of instantaneous readings |
| Report | Report results of analysis |
| Residual Chlorine | Means chlorine remaining in water or wastewater at the end of a specified contact period as combined or free chlorine |
| Responsible Corporate Officer ^a | Means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation The Responsible Corporate Officer can also be the manager of one or more manufacturing, production, or operating facilities if the requirements of 18 AAC 83.385(a)(1)(B)(i)-(iii) are met. |
| Secondary Recreation ^b | Means activities in which incidental water use can occur. Secondary recreation includes boating, camping, hunting, hiking, wading, and recreational fishing. Secondary contact recreation does not include fish consumption. |
| Settleable Solids ^b | Means solid material of organic or mineral origin that is transported by and deposited from water, as measured by the volumetric Imhoff cone method and at the method detection limits specified in method 2540(F), <i>Standard Methods for the Examination of Water and Wastewater</i> , 18th edition (1992), adopted by reference in 18 AAC 70.020(c)(1) |
| Severe Property Damage ^a | Means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. |

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

APPENDIX C

| | |
|---|---|
| Sheen ^b | Means an iridescent appearance on the water surface |
| Shellfish ^b | Means a species of crustacean, mollusk, or other aquatic invertebrate with a shell or shell-like exoskeleton in any stage of its life cycle |
| Suspended Solids | Means insoluble solids that either float on the surface of, or are in suspension in, water, wastewater, or other liquids. The quantity of material removed from wastewater in a laboratory test, as prescribed in <i>Standard Methods for the Examination of Water and Wastewater</i> and referred to as nonfilterable. |
| Total Suspended Solids (TSS) ^g | Means a measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136 |
| Toxic Unit, Chronic (TUC) ^e | Means the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period (i.e., 100/NOEC) |
| Twice per year | Means two time periods during the calendar year: October through April and May through September |
| Upset ^a | Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. |
| Water Depth | Means the depth of the water between the surface and the seafloor as measured at MLLW |
| Wastewater Treatment | Means any process to which wastewater is subjected in order to remove or alter its objectionable constituents and make it suitable for subsequent use or acceptable for discharge to the environment |
| Waters of the United States or Waters of the U.S. | Has the meaning given in 18 AAC 83.990(77) |
| Water Recreation ^b | See contact recreation or secondary recreation |
| Water Supply ^b | Means any of the waters of the United States that are designated in 18 AAC 70 to be protected for fresh water or marine water uses. Water supply includes waters used for drinking, culinary, food processing, agricultural, aquacultural, seafood processing, and industrial purposes. Water supply does not necessarily mean that water in a waterbody that is protected as a supply for the uses listed in this paragraph is safe to drink in its natural state. |
| Week | Means the time period of Sunday through Saturday |

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual